

Title (en)

METHOD AND APPARATUS FOR IDENTIFICATION OF RADIO FREQUENCY TAG

Title (de)

VERFAHREN UND VORRICHTUNG ZUR IDENTIFIKATION EINES HOCHFREQUENZETIKETTS

Title (fr)

PROCÉDÉ ET APPAREIL PERMETTANT L'IDENTIFICATION D'UNE ÉTIQUETTE D'IDENTIFICATION PAR RADIOFRÉQUENCE

Publication

EP 2062195 A1 20090527 (EN)

Application

EP 07805578 A 20070911

Priority

- IL 2007001119 W 20070911
- US 84438206 P 20060914

Abstract (en)

[origin: WO2008032313A1] A radio frequency identification data tag, a system and a method for reading the tag are described. The tag comprises a plurality of diffractive elements which are indicative of data carried by the tag. The diffractive elements have such shape that the dimension of the diffractive elements along one axis is substantially different than the dimension of the elements along the perpendicular axis. The diffractive elements are arranged in columns and rows in accordance with a predetermined layout scheme. In each column, the diffractive element is oriented in a direction other than the direction of the elements in the neighboring columns. The system for reading the tag comprises an array of transmitting (Tx) antennas for emitting an RF transmitted radiation signal at a predetermined polarization towards the tag, and an array of receiving (Rx) antennas configured for collecting re-radiated RF radiation produced by the tag at a polarization orthogonal to the polarization of the transmitting antenna. The system also includes an interrogator unit configured for generating the RF transmitted signal, and processing the RF received signal for reading the data carried tag. The reading is carried out by using amplitude information of SAR images based on the received signal for determining the arrangement of symbol elements in columns and phase information of the SAR images for determining the arrangement of the symbol elements in rows.

IPC 8 full level

G06K 7/10 (2006.01); **G06K 19/067** (2006.01)

CPC (source: EP US)

G01S 13/751 (2013.01 - EP); **G01S 13/9023** (2013.01 - EP); **G01S 13/9076** (2019.04 - EP); **G06K 7/10009** (2013.01 - EP US); **G06K 19/0672** (2013.01 - EP US); **G06K 19/086** (2013.01 - EP US); **G01S 13/9076** (2019.04 - US)

Citation (search report)

See references of WO 2008032313A1

Citation (examination)

US 2005280504 A1 20051222 - PETTUS MICHAEL G [US]

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

WO 2008032313 A1 20080320; EP 2062195 A1 20090527; JP 2010503911 A 20100204; US 2009231104 A1 20090917; US 7969281 B2 20110628

DOCDB simple family (application)

IL 2007001119 W 20070911; EP 07805578 A 20070911; JP 2009527959 A 20070911; US 40219209 A 20090311